

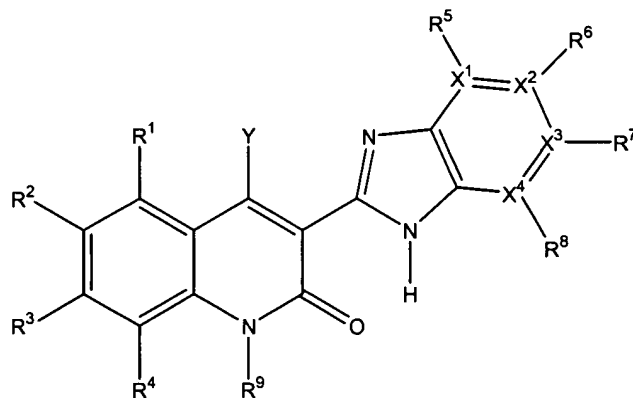
AMENDMENTS TO THE CLAIMS

Please amend claims 29, 30, and 31 as shown below in the "Listing of the Claims" without prejudice to Applicants' rights to pursue such claims in a timely filed divisional or continuation application(s). Please add new claims 38-48 as also shown below in the "Listing of the Claims". The amendments to claims 29, 30, and 31 are shown with highlighting for the Examiner's convenience.

LISTING OF THE CLAIMS

1-28. (Canceled).

29. (Currently Amended) A compound having the structure II, a tautomer of the compound, a pharmaceutically acceptable salt of the compound, or a pharmaceutically acceptable salt of the tautomer



II

wherein,

Y is selected from the group consisting of [[H,]]-OH, -OR¹⁰ groups, -SH, -SR¹¹ groups, -NR¹²R¹³ groups, -CN, -C(=O)-R¹⁴ groups[, substituted and unsubstituted alkyl groups, substituted and unsubstituted alkenyl groups, substituted and unsubstituted alkynyl groups]], substituted and unsubstituted aralkyl groups, substituted and unsubstituted heterocyclalkyl groups, substituted and unsubstituted alkylaminoalkyl groups, substituted and

unsubstituted dialkylaminoalkyl groups, substituted and unsubstituted arylaminoalkyl groups, substituted and unsubstituted diarylaminoalkyl groups, substituted and unsubstituted (alkyl)(aryl)aminoalkyl groups, substituted and unsubstituted heterocyclaminoalkyl groups, substituted and unsubstituted heterocycl groups, substituted and unsubstituted aryl groups, substituted and unsubstituted hydroxyalkyl groups, substituted and unsubstituted alkoxyalkyl groups, substituted and unsubstituted aryloxyalkyl groups, and substituted and unsubstituted heterocycloxyalkyl groups;

X^1 , X^2 , X^3 , and X^4 are selected from the group consisting of C and N, wherein at least one of X^1 , X^2 , X^3 , or X^4 is N;

R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , and R^8 may be the same or different and are independently selected from the group consisting of H, Cl, Br, F, I, $-\text{NO}_2$, $-\text{CN}$, $-\text{OH}$, $-\text{OR}^{15}$ groups, $-\text{NR}^{16}\text{R}^{17}$ groups, $-\text{C}(=\text{O})\text{R}^{18}$ groups, $-\text{SH}$, $-\text{SR}^{19}$ groups, $-\text{S}(=\text{O})\text{R}^{20}$ groups, $\text{S}(=\text{O})_2\text{R}^{21}$ groups, substituted and unsubstituted amidinyl groups, substituted and unsubstituted guanidinyl groups, substituted and unsubstituted primary, secondary, and tertiary alkyl groups, substituted and unsubstituted aryl groups, substituted and unsubstituted alkenyl groups, substituted and unsubstituted alkynyl groups, substituted and unsubstituted heterocycl groups, substituted and unsubstituted alkylaminoalkyl groups, substituted and unsubstituted dialkylaminoalkyl groups, substituted and unsubstituted arylaminoalkyl groups, substituted and unsubstituted diarylaminoalkyl groups, substituted and unsubstituted (alkyl)(aryl)aminoalkyl groups, substituted and unsubstituted heterocyclalkyl groups, substituted and unsubstituted aminoalkyl groups, substituted and unsubstituted heterocyclaminoalkyl groups, substituted and unsubstituted hydroxyalkyl groups, substituted and unsubstituted alkoxyalkyl groups, substituted and unsubstituted aryloxyalkyl groups, and substituted and unsubstituted heterocycloxyalkyl groups; R^5 is absent or is H if X^1 is N; R^6 is absent or is H if X^2 is N; R^7 is absent or is H if X^3 is N; and R^8 is absent or is H if X^4 is N;

R^9 is selected from the group consisting of H, -OH, substituted and unsubstituted alkoxy groups, substituted and unsubstituted aryloxy groups, -NH₂, substituted and unsubstituted alkylamino groups, substituted and unsubstituted arylamino groups, substituted and unsubstituted dialkylamino groups, substituted and unsubstituted diarylamino groups, substituted and unsubstituted (alkyl)(aryl)amino groups, substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, -C(=O)H, -C(=O)-alkyl groups, and -C(=O)-aryl groups;

R^{10} is selected from the group consisting of substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, substituted and unsubstituted heterocyclyl groups, substituted and unsubstituted heterocyclylalkyl groups, -C(=O)H, -C(=O)-alkyl groups, -C(=O)-aryl groups, -C(=O)O-alkyl groups, -C(=O)O-aryl groups, -C(=O)NH₂, -C(=O)NH(alkyl) groups, -C(=O)NH(aryl) groups, -C(=O)N(alkyl)₂ groups, -C(=O)N(aryl)₂ groups, -C(=O)N(alkyl)(aryl) groups, -NH₂, -NH(alkyl) groups, -NH(aryl) groups, -N(alkyl)₂ groups, -N(alkyl)(aryl) groups, -N(aryl)₂ groups, -C(=O)NH(heterocyclyl) groups, -C(=O)N(heterocyclyl)₂ groups, -C(=O)N(alkyl)(heterocyclyl) groups, and -C(=O)N(aryl)(heterocyclyl) groups;

R^{11} and R^{19} may be the same or different and are independently selected from the group consisting of substituted and unsubstituted alkyl groups, and substituted and unsubstituted aryl groups;

R^{12} is selected from the group consisting of H, substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, and substituted and unsubstituted heterocyclyl groups;

R^{13} is selected from the group consisting of H, substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, substituted and unsubstituted heterocyclyl groups, -OH, alkoxy groups, aryloxy groups, -NH₂, substituted and unsubstituted heterocyclylalkyl groups, substituted and

unsubstituted aminoalkyl groups, substituted and unsubstituted alkylaminoalkyl groups, substituted and unsubstituted dialkylaminoalkyl groups, substituted and unsubstituted arylaminoalkyl groups, substituted and unsubstituted diarylaminoalkyl groups, substituted and unsubstituted (alkyl)(aryl)aminoalkyl groups, substituted and unsubstituted alkylamino groups, substituted and unsubstituted arylamino groups, substituted and unsubstituted dialkylamino groups, substituted and unsubstituted diarylamino groups, substituted and unsubstituted (alkyl)(aryl)amino groups, -C(=O)H, -C(=O)-alkyl groups, -C(=O)-aryl groups, -C(=O)O-alkyl groups, -C(=O)O-aryl groups, -C(=O)NH₂, -C(=O)NH(alkyl) groups, -C(=O)NH(aryl) groups, -C(=O)N(alkyl)₂ groups, -C(=O)N(aryl)₂ groups, -C(=O)N(alkyl)(aryl) groups, -C(=O)-heterocyclyl groups, -C(=O)-O-heterocyclyl groups, -C(=O)NH(heterocyclyl) groups, -C(=O)-N(heterocyclyl)₂ groups, -C(=O)-N(alkyl)(heterocyclyl) groups, -C(=O)-N(aryl)(heterocyclyl) groups, substituted and unsubstituted heterocyclylaminoalkyl groups, substituted and unsubstituted hydroxyalkyl groups, substituted and unsubstituted alkoxyalkyl groups, substituted and unsubstituted aryloxyalkyl groups, and substituted and unsubstituted heterocyclioxyalkyl groups;

R¹⁴ is selected from the group consisting of H, -OH, alkoxy groups, aryloxy groups, -NH₂, -NH(alkyl) groups, -NH(aryl) groups, -N(alkyl)₂ groups, -N(aryl)₂ groups, -N(alkyl)(aryl) groups, substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, -NH(heterocyclyl) groups, -N(heterocyclyl)₂ groups, -N(alkyl)(heterocyclyl) groups, and -N(aryl)(heterocyclyl) groups;

R¹² and R¹³ may join together to form a 5 to 7 membered saturated or unsaturated, substituted or unsubstituted N-containing ring;

R¹⁵ is selected from the group consisting of substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, substituted and

unsubstituted heterocyclyl groups, substituted and unsubstituted heterocyclylalkyl groups, -C(=O)H, -C(=O)-alkyl groups, -C(=O)-aryl groups, -C(=O)NH₂, -C(=O)NH(alkyl) groups, -C(=O)NH(aryl) groups, -C(=O)N(alkyl)₂ groups, -C(=O)N(aryl)₂ groups, -C(=O)N(alkyl)(aryl) groups, substituted and unsubstituted aminoalkyl groups, substituted and unsubstituted alkylaminoalkyl groups, substituted and unsubstituted dialkylaminoalkyl groups, substituted and unsubstituted arylaminoalkyl groups, substituted and unsubstituted diarylaminoalkyl groups, substituted and unsubstituted (alkyl)(aryl)aminoalkyl groups, substituted and unsubstituted heterocyclylaminoalkyl groups, substituted and unsubstituted diheterocyclylaminoalkyl groups, substituted and unsubstituted (heterocyclyl)(alkyl)aminoalkyl groups, substituted and unsubstituted (heterocyclyl)(aryl)aminoalkyl groups, substituted and unsubstituted alkoxyalkyl groups, substituted and unsubstituted aryloxyalkyl groups, substituted and unsubstituted hydroxyalkyl groups, and substituted and unsubstituted heterocycliloxyalkyl groups;

R¹⁶ is selected from the group consisting of H, substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, and substituted and unsubstituted heterocyclyl groups;

R¹⁷ is selected from the group consisting of H, substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, substituted and unsubstituted heterocyclyl groups, OH, substituted and unsubstituted alkoxy groups, substituted and unsubstituted aryloxy groups, -NH₂, -C(=O)H, -C(=O)-alkyl groups, -C(=O)-aryl groups, -C(=O)NH₂, -C(=O)NH(alkyl) groups, -C(=O)NH(aryl) groups, -C(=O)N(alkyl)₂ groups, -C(=O)N(aryl)₂ groups, -C(=O)N(alkyl)(aryl) groups, -C(=O)O-alkyl groups, -C(=O)O-aryl groups, substituted and unsubstituted aminoalkyl groups, substituted and unsubstituted alkylaminoalkyl groups, substituted and unsubstituted dialkylaminoalkyl groups, substituted and unsubstituted arylaminoalkyl groups, substituted and unsubstituted diarylaminoalkyl groups, substituted and unsubstituted

(aryl)(alkyl)aminoalkyl groups, substituted and unsubstituted heterocyclalkyl groups, -C(=O)-heterocycl groups, -C(=O)-Oheterocycl groups, -C(=O)NH(heterocycl) groups, -C(=O)-N(heterocycl)₂ groups, -C(=O)-N(alkyl)(heterocycl) groups, -C(=O)-N(aryl)(heterocycl) groups, substituted and unsubstituted heterocyclaminoalkyl groups, substituted and unsubstituted hydroxyalkyl groups, substituted and unsubstituted alkoxyalkyl groups, substituted and unsubstituted aryloxyalkyl groups, and substituted and unsubstituted heterocycloxyalkyl groups;

R¹⁶ and R¹⁷ may join together to form a 5 to 7 membered saturated or unsaturated, substituted or unsubstituted N-containing ring; and

R¹⁸, R²⁰, and R²¹ may be the same or different and are independently selected from the group consisting of H, -NH₂, -NH(alkyl) groups, -NH(aryl) groups, -N(alkyl)₂ groups, -N(aryl)₂ groups, -N(alkyl)(aryl) groups, substituted and unsubstituted alkyl groups, substituted and unsubstituted aryl groups, -OH, substituted and unsubstituted alkoxy groups, substituted and unsubstituted aryloxy groups, substituted and unsubstituted heterocycl groups, -NHOH, -N(alkyl)OH groups, -N(aryl)OH groups, -N(alkyl)O-alkyl groups, -N(aryl)O-alkyl groups, -N(alkyl)O-aryl groups, and -N(aryl)O-aryl groups.

30. (Currently Amended) The compound according to claim 29, wherein Y is selected from the group consisting of [[H,]]-OH, -OR¹⁰ groups, and -NR¹²R¹³ groups.

31. (Currently Amended) The compound according to claim 29, wherein at least two of X¹, X², X³, and X⁴ are C and the corresponding substituents R⁵, R⁶, R⁷, and R⁸ are hydrogen, and at least one of X¹, X², X³, and X⁴ is N.

32. (Original) The compound according to claim 29, wherein R⁶ or R⁷ is an alkyl group.

33. (Original) The compound according to claim 29, wherein R^6 or R^7 is an $-OR^{15}$ group and R^{15} is an alkyl, aryl, heterocyclyl, or heterocyclylalkyl group.

34. (Original) The compound according to claim 29, wherein R^1 is selected from the group consisting of H, substituted and unsubstituted alkoxy groups, substituted and unsubstituted heterocyclalkoxy groups, substituted and unsubstituted heterocyclloxy groups, and substituted and unsubstituted heterocycl groups.

35. (Original) The compound according to claim 29, wherein R^2 is selected from the group consisting of H, F, Cl, $-NO_2$, substituted and unsubstituted heterocycl groups, and substituted and unsubstituted heterocyclalkoxy groups.

36. (Previously Presented) A pharmaceutical formulation, comprising the compound according to claim 29 in combination with a pharmaceutically acceptable carrier.

37. (Original) A method of treating a patient in need of an inhibitor of vascular endothelial growth factor receptor tyrosine kinase, comprising administering an effective amount of the pharmaceutical formulation according to claim 36 to a patient in need thereof.

38. (New) The compound according to claim 29, wherein Y is an $-NR^{12}R^{13}$ group.

39. (New) The compound according to claim 38, wherein R^{12} and R^{13} are both H.

40. (New) The compound according to claim 38, wherein Y is selected from $-N(CH_3)_2$, $-NH(CH_3)$, $-NH(CH_2CH_3)$, $-N(CH_2CH_3)_2$, $-NH(aryl)$ groups, $-N(aryl)_2$ groups, $-NHNH_2$, $-NHN(CH_3)_2$, $-N(CH_3)NH(CH_3)$, $-NH(CH_2)_mNH_2$ groups, $-NH(CH_2)_mNH(alkyl)$ groups, $-NH(CH_2)_mN(alkyl)_2$ groups, $-N(alkyl)(CH_2)_mNH_2$ groups, $-N(alkyl)(CH_2)_mNH(alkyl)$ groups, $-N(alkyl)(CH_2)_mN(alkyl)_2$ groups, $-NH(CH_2)_n(heterocyclyl)$ groups, $-N(alkyl)[(CH_2)_n(heterocyclyl)]$ groups, $-NH(CH_2)_mOH$

groups, $\text{-NH(CH}_2\text{)}_m\text{OCH}_3$ groups, $\text{-NHCH}_2\text{CH(NH}_2\text{)CH(CH}_3\text{)}_2$, $\text{-NH(2-aminocyclohexyl)}$, -NH(cyclohexyl) , -NHOCH_3 , $\text{-NH(N-morpholinyl)}$, or -NH(quinuclidyl) groups, wherein m is 2, 3, or 4 and n is 0, 1, 2, or 3.

41. (New) The compound according to claim 40, wherein Y is an $\text{-NH(quinuclid-3-yl)}$ group.

42. (New) The compound according to claim 29, wherein at least one of R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , or R^8 is a substituted or unsubstituted heterocyclyl group.

43. (New) The compound according to claim 29, wherein at least one of R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , or R^8 is a substituted or unsubstituted morpholine, piperazine, piperidine, 1,2,3-triazole, 1,2,4-triazole, tetrazole, pyrrolidine, pyrazole, pyrrole, thiomorpholine, homopiperazine, benzimidazole, oxazolidin-2-one, pyrrolidin-2-one, imidazole, isoxazole, oxazole, isothiazole, thiazole, thiophene, furan, pyran, tetrahydrothiophene, tetrahydrofuran, tetrahydropyran, or pyridine group.

44. (New) The compound according to claim 43, wherein one of R^6 or R^7 is a substituted or unsubstituted morpholine, piperazine, piperidine, 1,2,3-triazole, 1,2,4-triazole, tetrazole, pyrrolidine, pyrazole, pyrrole, thiomorpholine, homopiperazine, benzimidazole, oxazolidin-2-one, pyrrolidin-2-one, imidazole, isoxazole, oxazole, isothiazole, thiazole, thiophene, furan, pyran, tetrahydrothiophene, tetrahydrofuran, tetrahydropyran, or pyridine group.

45. (New) The compound according to claim 44, wherein one of R^6 or R^7 is a substituted or unsubstituted piperazine group.

46. (New) The compound according to claim 29, wherein R^1 is F.

47. (New) The compound according to claim 29, wherein R^2 is H.

48. (New) A method of treating a patient in need of an inhibitor of vascular endothelial growth factor receptor tyrosine kinase, comprising administering an effective amount of the compound according to claim 29 to a patient in need thereof.